# 1

- Inverter chiller
- Optimised for use with R-410A
- Daikin swing compressor
- Integrated hydronics
- No buffer tank needed
- Advanced control possibilities
- Precise temperature control
- Single phase power supply

# 2 Specifications

| 2-1 TECHNICAL SPECIFICATIONS | | | | EWYQ005ACV3P | EWYQ006ACV3P | EWYQ007ACV3P |
|---|---|---|---|---|---|---|
| Capacity (Eurovent conditions specified in notes) | Cooling | Minimum | kW | 4.01 | 4.01 | 4.01 |
| | | Nominal | kW | 5.2 | 6.0 | 7.1 |
| | | Maximum | kW | 5.2 | 6.0 | 7.1 |
| | Heating | Minimum | kW | 4.09 | 4.09 | 4.09 |
| | | Nominal | kW | 5.65 | 6.35 | 7.75 |
| | | Maximum | kW | 6.83 | 8.13 | 8.73 |
| Capacity (conditions specified in notes) | Heating | Minimum | kW | 4.5 | 4.5 | 4.5 |
| | | Nominal | kW | 6.1 | 6.8 | 8.2 |
| | | Maximum | kW | 7.27 | 8.58 | 9.18 |
| Nominal input (Eurovent conditions specified in notes) | Cooling | | kW | 1.89 | 2.35 | 2.95 |
| | Heating | | kW | 1.97 | 2.24 | 2.83 |
| Nominal input (conditions specified in notes) | Heating | | kW | 1.60 | 1.84 | 2.36 |
| EER | | | | 2.75 | 2.55 | 2.41 |
| COP (Eurovent conditions specified in notes) | | | | 2.87 | 2.83 | 2.74 |
| COP (conditions specified in notes) | | | | 3.81 | 3.7 | 3.47 |
| Casing | Colour | | | Ivory white | | |
| | Material | | | Polyester painted steel plate | | |
| Dimensions | Unit | Height | mm | 805 | | |
| | | Width | mm | 1190 | | |
| | | Depth | mm | 360 | | |
| | Unit with packing | Height | mm | 915 | | |
| | | Width | mm | 1265 | | |
| | | Depth | mm | 442 | | |
| Weight | Unit | | kg | 100 | | |
| | Operating Weight | | kg | 104 | | |
| | Gross weight | | kg | 108 | | |
| Water Heat Exchanger | Type | | | Brased plate | | |
| | Filter | Type | | Brass Y-strainer | | |
| | | Diameter perforations | mm | 1 | 1 | 1 |
| | Minimum water volume in the system | | l | 10 | 10 | 10 |
| | Water flow rate | Min | l/min | 12 | 12 | 12 |
| | Nominal Water Flow | Cooling | l/min | 14.9 | 17.2 | 20.4 |
| | | Heating | l/min | 17.5 | 19.5 | 23.5 |
| | Insulation material | | | Polyethylene foam | | |
| | Model | Quantity | | 1 | 1 | 1 |
| | | Model | | ACH30-48 | | |
| Air heat exchanger | Type | | | Tube type | | |
| | Rows | | | 2 | | |
| | Stages | | | 32 | | |
| | Fin Pitch | | mm | 1.8 | | |
| Pump | Type | | | Water cooled | | |
| | Quantity | | | 1 | 1 | 1 |
| | Model | | | RS 25/7 3PL 130 3 | | |
| | Nominal static height unit | Heating | kPa | 49.4 | 45.1 | 38.3 |
| | | Heating | kPa | 44.5 | 40.3 | 30.7 |
| Hydraulic components | Antifreeze heater | | W | 75 | | |
| | Expansion vessel | Volume | l | 6 | | |
| | | Pre-pressure | bar | 1 | | |
| | Water filter | | inch | 1" | | |
| | Safety valve | | bar | 3 | | |

# 2 Specifications



| 2-1 TECHNICAL SPECIFICATIONS | | | | EWYQ005ACV3P | EWYQ006ACV3P | EWYQ007ACV3P |
|---|---|---|---|---|---|---|
| Fan | Type | | | Propeller | | |
| | Model | Quantity | | 1 | | |
| | | Motor Output | W | 53 | | |
| | | Discharge direction | | Horizontal | | |
| Compressor | Type | | | Hermetically sealed swing compressor | | |
| | Refrigerant oil type | | | FVC50K | | |
| | Refrigerant oil charge | | l | 0.75 | | |
| | Model | Quantity | | 1 | | |
| | | Model | | 2YC63BXD#C | | |
| Sound Level | Sound Power | Cooling | dBA | 62 | 62 | 63 |
| | Sound Pressure | Cooling | dBA | 48 | 48 | 50 |
| | | Heating | dBA | 48 | 48 | 49 |
| Refrigerant circuit | Refrigerant type | | | R-410A | | |
| | Refrigerant charge | | kg | 1.7 | | |
| | No of circuits | | | 1 | | |
| | Refrigerant control | | | Inverter | | |
| Piping connections | Water heat exchanger inlet / outlet | | | 1" MBSP | | |
| | Water heat exchanger drain | | | hose nipple 1/2" FBSP | | |
| Notes | | | | Nominal cooling capacity is based on the following conditions: evaporator: 12°C/7°C; ambient: 35°C | | |
| | | | | Nominal heating capacity, heating power input and COP at non-Eurovent conditions: ambient 7°CDB/6CWB; condensor 30°C/35°C. | | |
| | | | | Nominal heating capacity, heating power input and COP at Eurovent conditions: ambient 7°CDB/6CWB; condensor 40°C/45°C. | | |
| | | | | The sound pressure level is measured via a microphone at a certain distance from the unit. It is a relative value, depending on the distance and acoustic environment. | | |

| 2-2 ELECTRICAL SPECIFICATIONS | | | | EWYQ005ACV3P | EWYQ006ACV3P | EWYQ007ACV3P |
|---|---|---|---|---|---|---|
| Power Supply | Name | | | V3 | | |
| | Phase | | | 1 | | |
| | Frequency | | Hz | 50 | | |
| | Voltage | | V | 230 | | |
| | Voltage Tolerance | Minimum | % | -10% | | |
| | | Maximum | % | +10% | | |
| Unit | Zmax | list | | No requirements | | |
| | Maximum Running Current | | A | 19 | | |
| | Recommended fuses according to IEC standard 269-2 | | | 20 | | |
| Fan | Quantity | | | 1 | | |
| | Phase | | | 1 | | |
| | Voltage | | V | 230 | | |
| Pump | Phase | | | 1 | | |
| | Power input | | kW | 0.13 | | |
| | Voltage | | V | 230 | | |
| | Maximum Running Current | | A | 0.58 | | |
| | Speed | Minimum | rpm | 1050 | | |
| | | Nominal | rpm | 2250 | | |
| | | Maximum | rpm | 2450 | | |
| Evaporator Heater Tape | Supply Voltage | | V | 230 | | |
| | Capacity | | W | 75 | | |
| | Voltage Tolerance | Minimum | % | -10% | | |
| | | Maximum | % | +10% | | |
| | Recommended fuses | | | 25A | | |
| Notes | | | | Fuse value valid for complete unit | | |

# 3 Features

# 4 Options

Capacity: 5 - 7.1 kW

**Modelnumber**

EWAQ005A*V3P EWYQ005A*V3P
EWAQ006A*V3P EWYQ006A*V3P
EWAQ007A*V3P EWYQ007A*V3P

| Option number | Option description | (On) | Unit size | | | | | | Availability |
|---|---|---|---|---|---|---|---|---|---|
| | | | EWAQ005A*V3P | EWAQ006A*V3P | EWAQ007A*V3P | EWYQ005A*V3P | EWYQ006A*V3P | EWYQ007A*V3P | |
| | Standard unit | | | | | | | | |
| | **Available options** | | | | | | | | |
| OP10 | Evaporator heatertape | -H- | ○ | ○ | ○ | ○ | ○ | ○ | Factory mounted |

3TW57539-5

**Notes**

○ Available

# 5 Capacity tables

## 5 - 1 Cooling/Heating capacity tables

### COOLING

| Model | Tamb (°C) | 20 | | 25 | | 30 | | 35 | | 40 | | 43 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LWE (°C) | CC | PI | CC | PI | CC | PI | CC | PI | CC | PI | CC | PI |
| 005 | 7 | 6.15 | 1.37 | 5.85 | 1.53 | 5.53 | 1.70 | 5.20 | 1.89 | 4.52 | 2.02 | 3.93 | 2.22 |
| | 11 | 6.97 | 1.38 | 6.63 | 1.55 | 6.28 | 1.74 | 5.92 | 1.94 | 4.99 | 1.99 | 4.26 | 2.13 |
| | 13 | 7.40 | 1.38 | 7.04 | 1.56 | 6.68 | 1.75 | 6.30 | 1.96 | 5.23 | 1.97 | 4.43 | 2.08 |
| | 16 | 8.06 | 1.38 | 7.69 | 1.57 | 7.30 | 1.77 | 6.90 | 1.99 | 5.60 | 1.93 | 4.67 | 2.00 |
| | 20 | 9.00 | 1.38 | 8.60 | 1.58 | 8.18 | 1.80 | 7.75 | 2.02 | 6.10 | 1.88 | 4.97 | 1.87 |
| 006 | 7 | 7.06 | 1.74 | 6.73 | 1.93 | 6.37 | 2.14 | 6.00 | 2.35 | 4.93 | 2.30 | 4.11 | 2.36 |
| | 11 | 7.96 | 1.78 | 7.59 | 1.99 | 7.20 | 2.20 | 6.78 | 2.43 | 5.43 | 2.29 | 4.45 | 2.29 |
| | 13 | 8.44 | 1.80 | 8.05 | 2.01 | 7.64 | 2.24 | 7.20 | 2.47 | 5.69 | 2.28 | 4.62 | 2.24 |
| | 16 | 9.18 | 1.82 | 8.76 | 2.05 | 8.32 | 2.28 | 7.86 | 2.53 | 6.09 | 2.26 | 4.88 | 2.17 |
| | 20 | 10.2 | 1.85 | 9.8 | 2.09 | 9.29 | 2.34 | 8.79 | 2.60 | 6.64 | 2.22 | 5.21 | 2.05 |
| 007 | 7 | 8.31 | 2.23 | 7.94 | 2.46 | 7.54 | 2.70 | 7.10 | 2.95 | 5.49 | 2.65 | 4.36 | 2.55 |
| | 11 | 9.31 | 2.31 | 8.89 | 2.55 | 8.44 | 2.81 | 7.49 | 2.94 | 5.79 | 2.59 | 4.60 | 2.45 |
| | 13 | 9.82 | 2.35 | 9.39 | 2.60 | 8.91 | 2.86 | 7.78 | 2.91 | 5.99 | 2.53 | 4.75 | 2.38 |
| | 16 | 10.6 | 2.41 | 10.15 | 2.67 | 9.65 | 2.94 | 8.23 | 2.85 | 6.28 | 2.45 | 4.95 | 2.26 |
| | 20 | 11.7 | 2.49 | 11.2 | 2.76 | 10.67 | 3.05 | 8.82 | 2.76 | 6.65 | 2.31 | 5.21 | 2.09 |

### HEATING

| Model | LWC | 30 | | 35 | | 40 | | 45 | | 50 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Tamb | HC | PI | HC | PI | HC | PI | HC | PI | HC | PI |
| 005 | -15 | 3.74 | 1.54 | 3.67 | 1.66 | 3.59 | 1.79 | 3.51 | 1.93 | 3.42 | 2.09 |
| | -10 | 4.40 | 1.63 | 4.30 | 1.76 | 4.19 | 1.91 | 4.07 | 2.07 | 3.94 | 2.25 |
| | -7 | 4.86 | 1.67 | 4.73 | 1.82 | 4.60 | 1.98 | 4.45 | 2.15 | 4.31 | 2.34 |
| | -2 | 5.69 | 1.74 | 5.54 | 1.91 | 5.37 | 2.09 | 5.20 | 2.28 | 5.02 | 2.48 |
| | 2 | 6.44 | 1.79 | 6.26 | 1.97 | 6.07 | 2.16 | 5.88 | 2.37 | 5.67 | 2.59 |
| | 7 | 7.48 | 1.85 | 7.27 | 2.04 | 7.05 | 2.25 | 6.83 | 2.47 | 6.60 | 2.71 |
| 006 | -15 | 4.63 | 1.94 | 4.60 | 2.08 | 4.56 | 2.23 | 4.50 | 2.40 | 4.42 | 2.58 |
| | -10 | 5.37 | 2.06 | 5.30 | 2.22 | 5.22 | 2.39 | 5.11 | 2.59 | 4.98 | 2.80 |
| | -7 | 5.88 | 2.13 | 5.78 | 2.30 | 5.67 | 2.49 | 5.54 | 2.70 | 5.38 | 2.92 |
| | -2 | 6.81 | 2.23 | 6.68 | 2.43 | 6.52 | 2.64 | 6.35 | 2.87 | 6.15 | 3.12 |
| | 2 | 7.64 | 2.31 | 7.48 | 2.53 | 7.29 | 2.76 | 7.09 | 3.01 | 6.87 | 3.27 |
| | 7 | 8.78 | 2.41 | 8.58 | 2.65 | 8.36 | 2.90 | 8.13 | 3.17 | 7.87 | 3.45 |
| 007 | -15 | 5.02 | 2.15 | 5.02 | 2.30 | 4.99 | 2.46 | 4.94 | 2.65 | 4.87 | 2.85 |
| | -10 | 5.82 | 2.29 | 5.76 | 2.46 | 5.68 | 2.65 | 5.58 | 2.86 | 5.46 | 3.10 |
| | -7 | 6.35 | 2.37 | 6.26 | 2.56 | 6.16 | 2.76 | 6.03 | 2.99 | 5.88 | 3.24 |
| | -2 | 7.33 | 2.50 | 7.20 | 2.71 | 7.05 | 2.95 | 6.88 | 3.20 | 6.69 | 3.47 |
| | 2 | 8.19 | 2.60 | 8.03 | 2.83 | 7.86 | 3.09 | 7.65 | 3.36 | 7.43 | 3.65 |
| | 7 | 9.37 | 2.72 | 9.18 | 2.98 | 8.97 | 3.25 | 8.73 | 3.55 | 8.47 | 3.86 |

3TW57532-1

#### SYMBOLS

CC : Cooling capacity at maximum operating frequency, measured acc. Eurovent 6/C/003-2006 (kW)

HC : Heating capacity at maximum operating frequency, measured acc. Eurovent 6/C/003-2006 (kW)

PI : Power input (kW)

LWE : Leaving evaporator water temperature (°C)

LWC : Leaving Water Condensor temperature (°C)

Tamb : Ambient temperature (°C) RH=85%

**Note:**
The heating capacity and power input in the table has to be multiplied by the correctionfactor CF as listed in the table below to obtain the integrated heating capacity and power input.
The integrated heating capacity and power input, is the average heating capacity and power input during 1 cycle. (from end of defrost till end of the next defrost).

| Tamb | -15 | -10 | -7 | -2 | 2 | 7 |
|---|---|---|---|---|---|---|
| CF for HC | 0.89 | 0,89 | 0,88 | 0,87 | 0,86 | 1,00 |
| CF for PI | 0.95 | 0,95 | 0,94 | 0,93 | 0,92 | 1,00 |

#### Conditions

1 **Cooling capacity**
Capacity is according to Eurovent rating standard 6/C/003-2006 and valid for chilled water range Dt = 3~8°C

2 **Heating capacity**
Capacity is according to Eurovent rating standard 6/C/003-2006 and valid for chilled water range Dt = 3~8°C

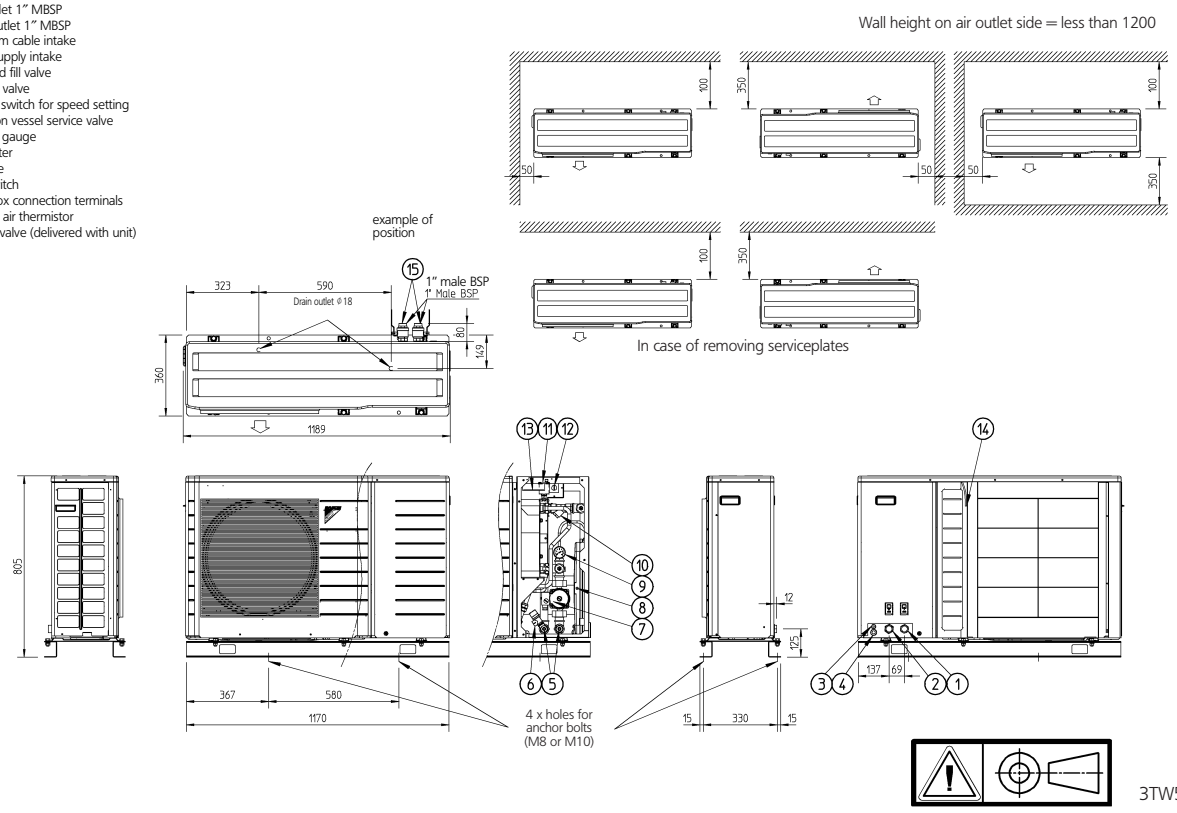
3 **Power input**
Power input is total input according to Eurovent rating standard 6/C/003-2006

# 6 Dimensional drawing & centre of gravity

## 6 - 1 Dimensional drawing

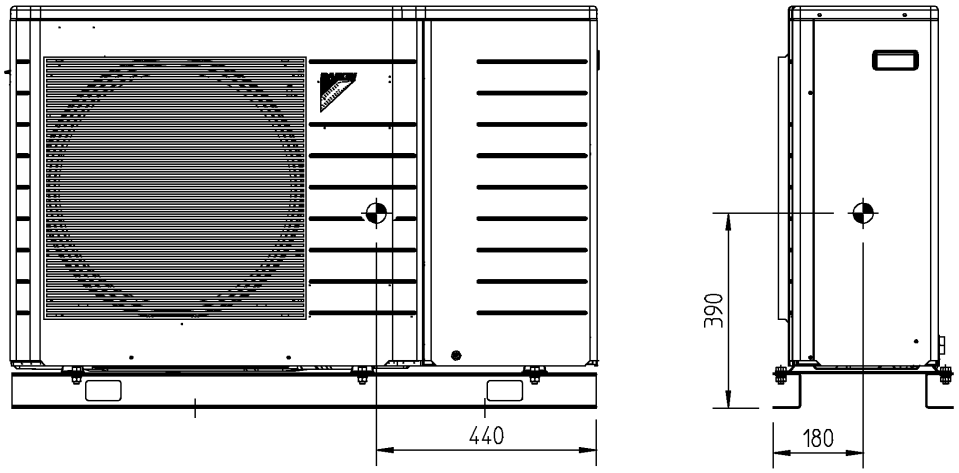


1 Water inlet 1" MBSP
2 Water outlet 1" MBSP
3 Remocom cable intake
4 Power supply intake
5 Drain and fill valve
6 Blow off valve
7 Pump + switch for speed setting
8 Expansion vessel service valve
9 Pressure gauge
10 Water filter
11 Air purge
12 Main switch
13 Switchbox connection terminals
14 Outdoor air thermistor
15 Shut off valve (delivered with unit)



# 6 Dimensional drawing & centre of gravity

## 6 - 2 Centre of gravity

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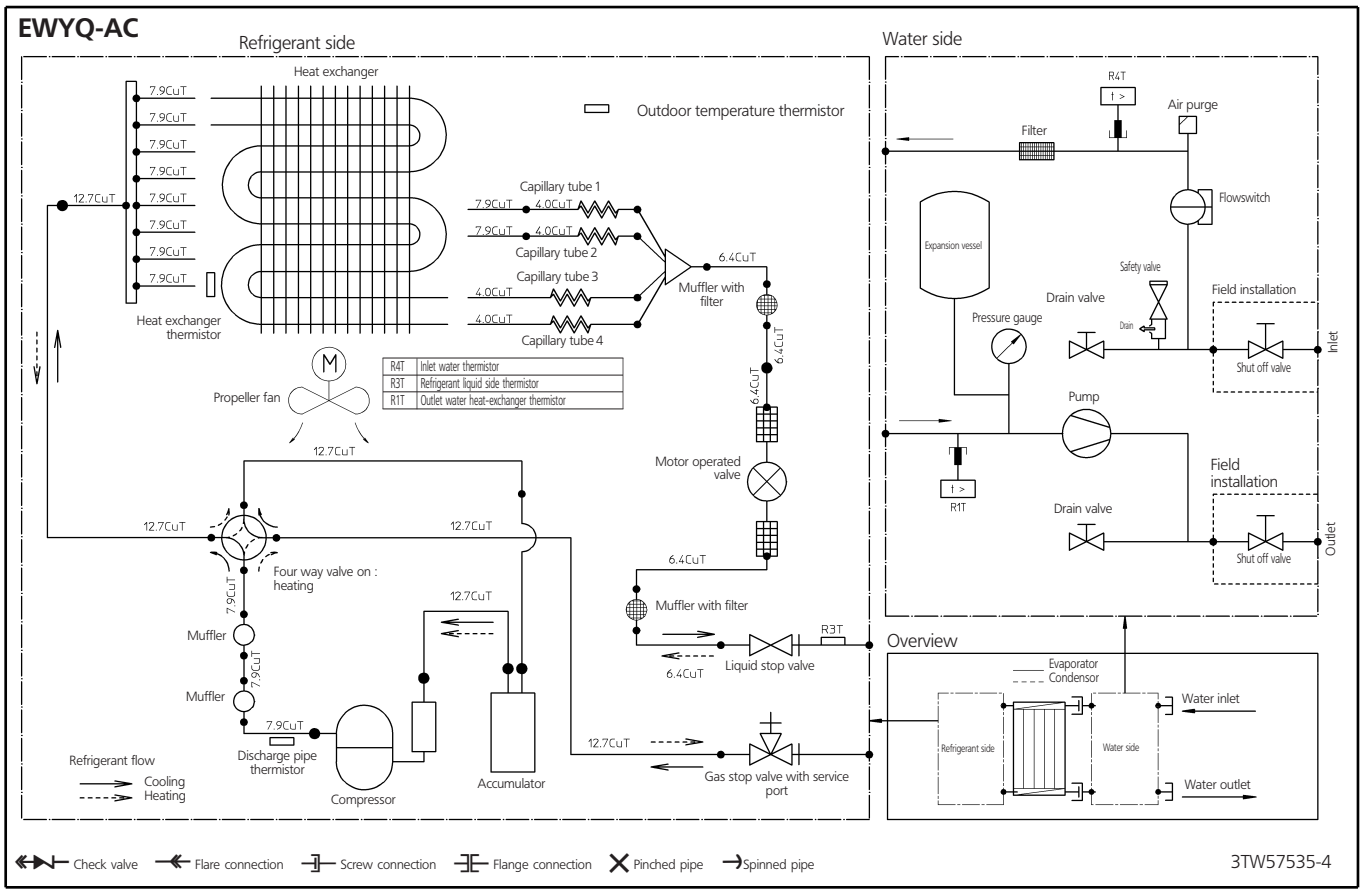
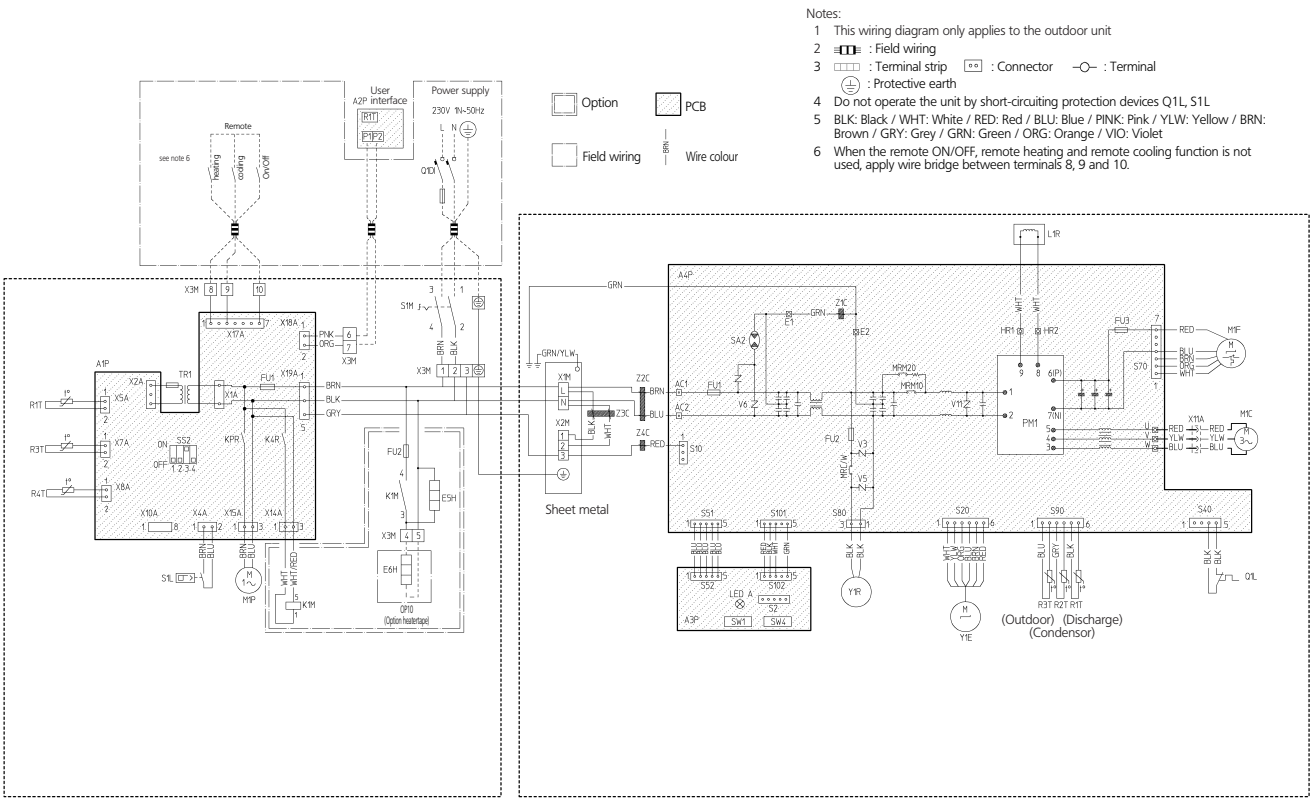
# 7 Piping diagram



# 8 Wiring diagram

## 8 - 1 Wiring diagram

**EWAQ/EWYQ AC**


Notes:
1 This wiring diagram only applies to the outdoor unit
2 : Field wiring
3 : Terminal strip : Connector : Terminal
: Protective earth
4 Do not operate the unit by short-circuiting protection devices Q1L, S1L
5 BLK: Black / WHT: White / RED: Red / BLU: Blue / PINK: Pink / YLW: Yellow / BRN: Brown / GRY: Grey / GRN: Green / ORG: Orange / VIO: Violet
6 When the remote ON/OFF, remote heating and remote cooling function is not used, apply wire bridge between terminals 8, 9 and 10.
Option
PCB
Field wiring
Wire colour
Remote
User interface
Power supply
Sheet metal
(Outdoor) (Discharge)
(Condensor)

| | |
|---|---|
| Q1DI | Earth leakage protector |
| TR1 | Transformer 24V for PCB |
| R4T | Inlet water thermistor |
| R3T | Refrigerant liquid side thermistor |
| R1T | Outlet water heat exchanger |
| S1L | Flowswitch |
| M1P | Pump |
| A2P | Remocom PCB (indoor) |
| A1P | Main PCB |
| S1M | Mainswitch |
| FU1 | Fuse 3.15A T 250V |
| FU2 | Fuse 5A 250V |
| X1A,X2A | Connector |
| X4A,X5A | Connector |
| X7A,X8A | Connector |
| X10A,X15A | Connector |
| X17A,X18A | Connector |
| X19A,X20A | Connector |
| E5H | Heatertape |
| E6H | Heatertape (Field supply) |
| SS2 | Dipswitch |
| K1M | Relay |
| X3M | Terminal strip |

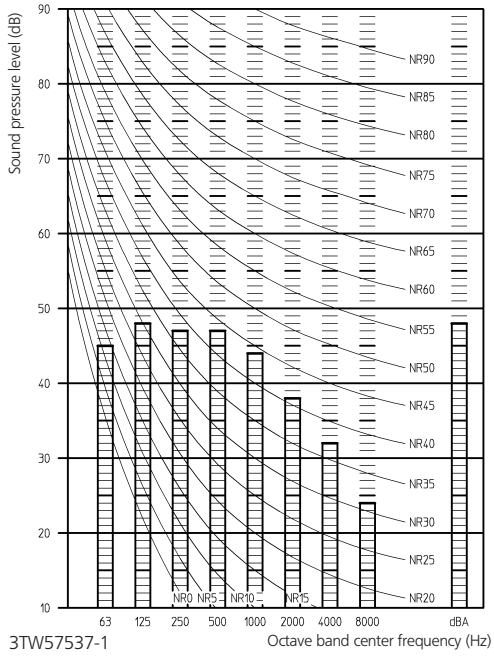
| | |
|---|---|
| Z1C~Z4C | Ferrite core |
| X1M,X2M | Terminal strip |
| Y1E | Electronic expansion valve coil |
| V2,V3,V5,V6,V11 | Varistor |
| SA2 | Surge arrester |
| FU1 | Fuse 30A 250V |
| FU2 | Fuse 3.15A 250V |
| FU3 | Fuse 3.15A 250V |
| AC1,AC2 | |
| U,V,W,X11A | Connector |
| E1,E2 | |
| HR1,HR2 | Connector |
| MRM10,MRM20 | Magnetic relay |
| MRC/W | Magnetic relay |
| R1T~R3T | Thermistor |
| S2~S102 | Connector |
| LED A | Pilot lamp |
| | |
| L | Live |
| N | Neutral |
| SW1 | Forced operation on/off SW (SW1) |
| SW4 | Local setting SW (SW4) |
| M1C | Compressor motors |
| M1F | Fan motor |
| L1R | Reactor |
| Q1L | Overload protector |
| PM1 | Power module |
| PCB1,2 | Printed circuit board |
| Y1R | Reversing solenoid valve coil |
| Sheet metal | Terminal strip fixed plate |

3TW57536-1A

# 9 Sound data

## 9 - 1 Sound pressure spectrum

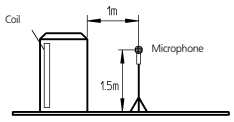
### EWAQ005AC
### EWYQ005AC (Cooling)




3TW57537-1

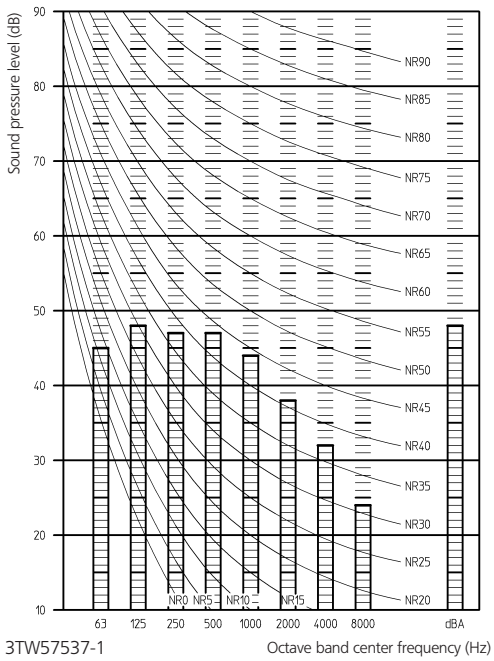
**NOTES**

1 Data is valid at free field condition (measured in a semi-anachoic room)
2 dB(A) = A-weighted sound pressure level (A-scale according to IEC)
3 Reference acoustic pressure 0dB = 20µPa
4 If sound is measured under actual installation conditions, the measured value will be higher due to environmental noise and sound reflections.




Location of microphone

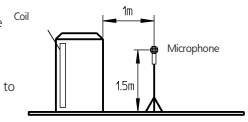
### EWAQ006AC
### EWYQ006AC (Cooling)




3TW57537-1

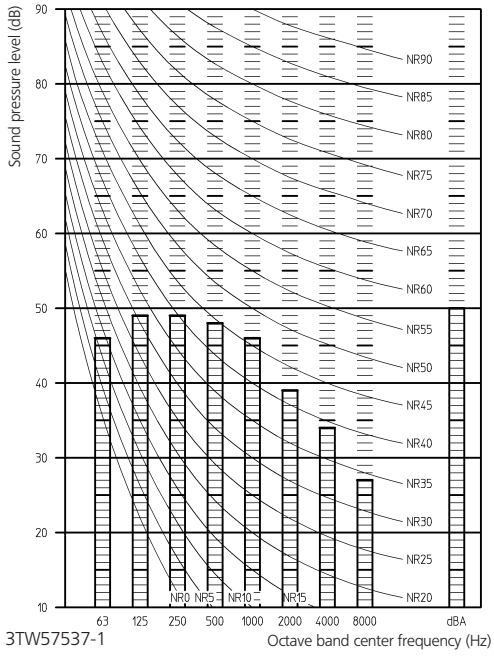
**NOTES**

1 Data is valid at free field condition (measured in a semi-anachoic room)
2 dB(A) = A-weighted sound pressure level (A-scale according to IEC)
3 Reference acoustic pressure 0dB = 20µPa
4 If sound is measured under actual installation conditions, the measured value will be higher due to environmental noise and sound reflections.




Location of microphone

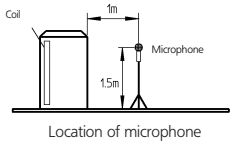
### EWAQ007AC
### EWYQ007AC (Cooling)




3TW57537-1

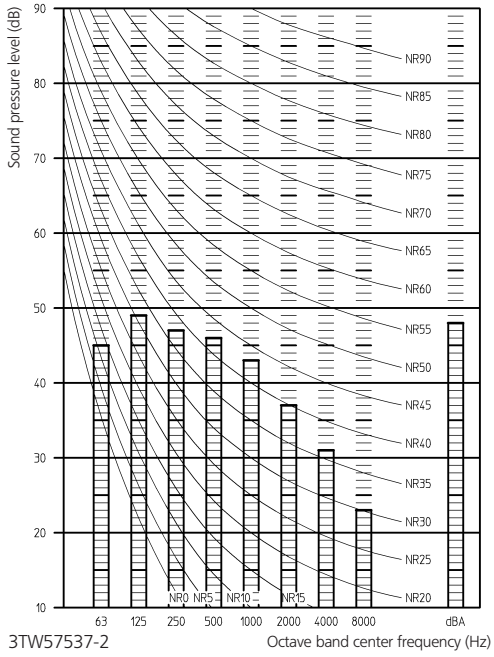
**NOTES**

1 Data is valid at free field condition (measured in a semi-anachoic room)
2 dB(A) = A-weighted sound pressure level (A-scale according to IEC)
3 Reference acoustic pressure 0dB = 20µPa
4 If sound is measured under actual installation conditions, the measured value will be higher due to environmental noise and sound reflections.




Location of microphone

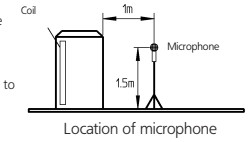
### EWYQ005AC (Heating)




3TW57537-2

**NOTES**

1 Data is valid at free field condition (measured in a semi-anachoic room)
2 dB(A) = A-weighted sound pressure level (A-scale according to IEC)
3 Reference acoustic pressure 0dB = 20µPa
4 If sound is measured under actual installation conditions, the measured value will be higher due to environmental noise and sound reflections..

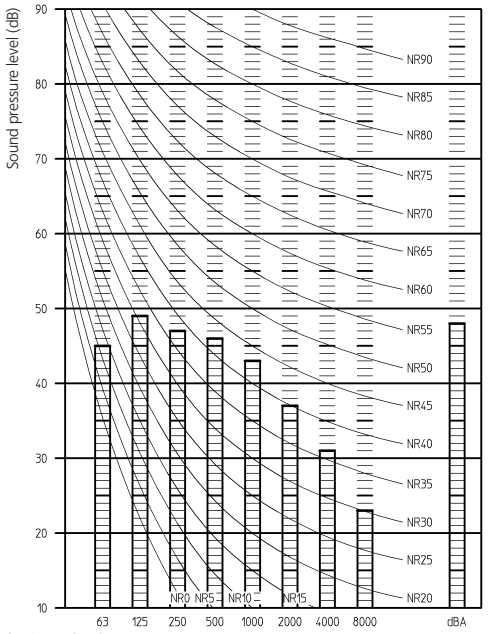



Location of microphone

# 9 Sound data

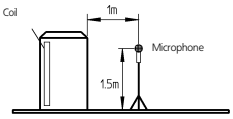
## 9 - 1 Sound pressure spectrum

**EWYQ006AC (Heating)**



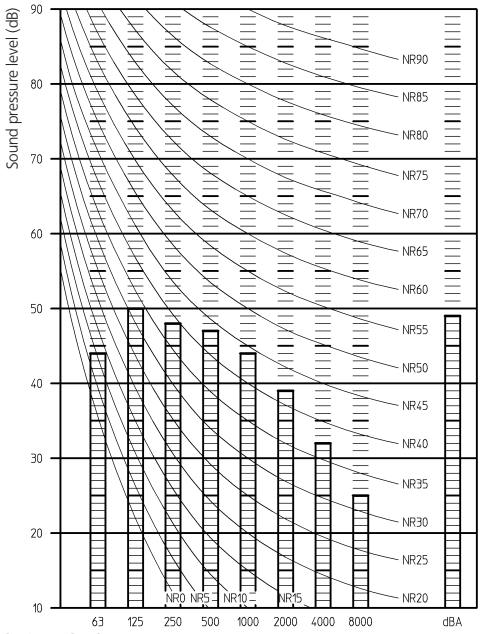

**NOTES**

1. Data is valid at free field condition (measured in a semi-anachoic room)
2. dB(A) = A-weighted sound pressure level (A-scale according to IEC)
3. Reference acoustic pressure 0dB = 20µPa
4. If sound is measured under actual installation conditions, the measured value will be higher due to environmental noise and sound reflections..



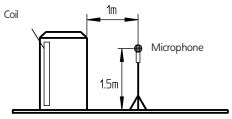

Location of microphone

**EWYQ007AC (Heating)**




**NOTES**

1. Data is valid at free field condition (measured in a semi-anachoic room)
2. dB(A) = A-weighted sound pressure level (A-scale according to IEC)
3. Reference acoustic pressure 0dB = 20µPa
4. If sound is measured under actual installation conditions, the measured value will be higher due to environmental noise and sound reflections.




Location of microphone

# 9 Sound data

## 9 - 2 Sound power spectrum

| | Sound power total (dBA) | |
|---|---|---|
| | LwA - Cooling mode | LwA - Heating mode |
| EWAQ005ACV3P*** | 62 | N/A |
| EWAQ006ACV3P*** | 62 | N/A |
| EWAQ007ACV3P*** | 63 | N/A |
| EWYQ005ACV3P*** | 62 | 60 |
| EWYQ006ACV3P*** | 62 | 60 |
| EWYQ007ACV3P*** | 63 | 61 |

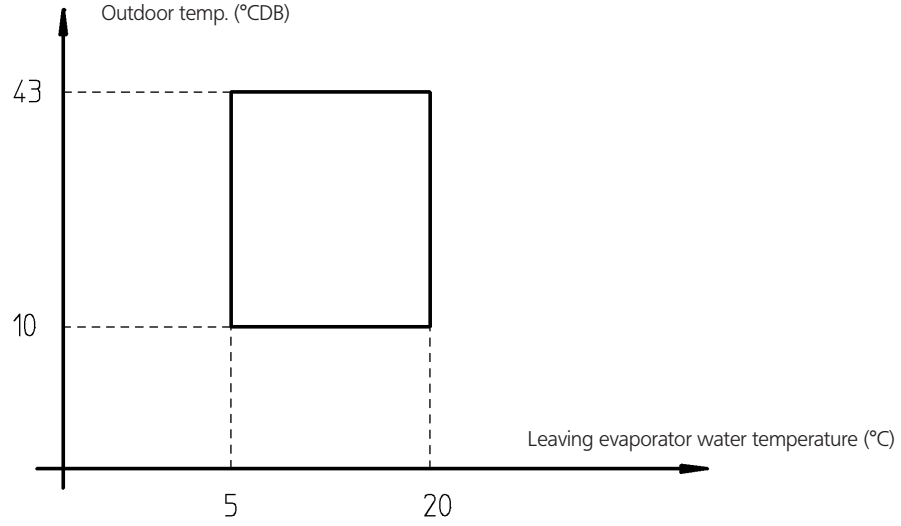
Notes:
- Data valid at nominal operation condition
- Measured according ISO3744

4TW57537-3A

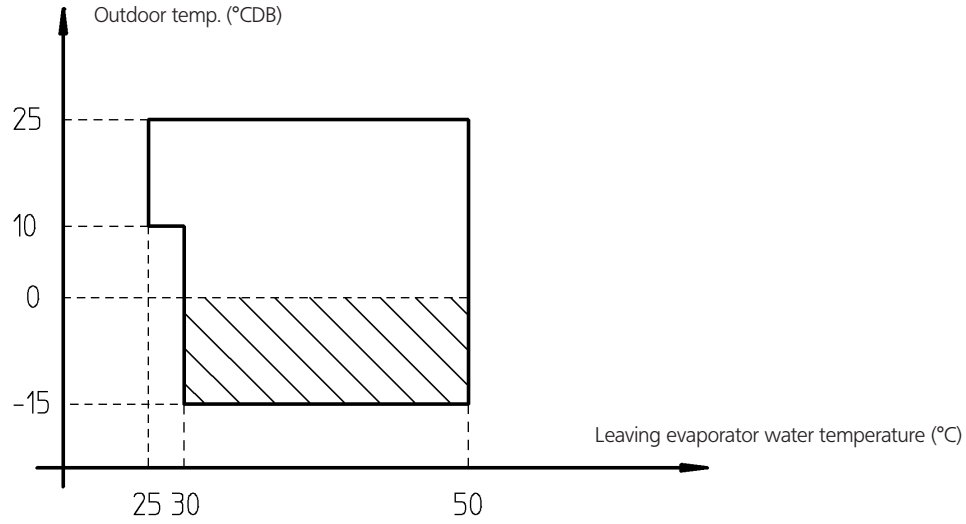
# 10 Operation range



**Cooling mode**




**Heating mode**



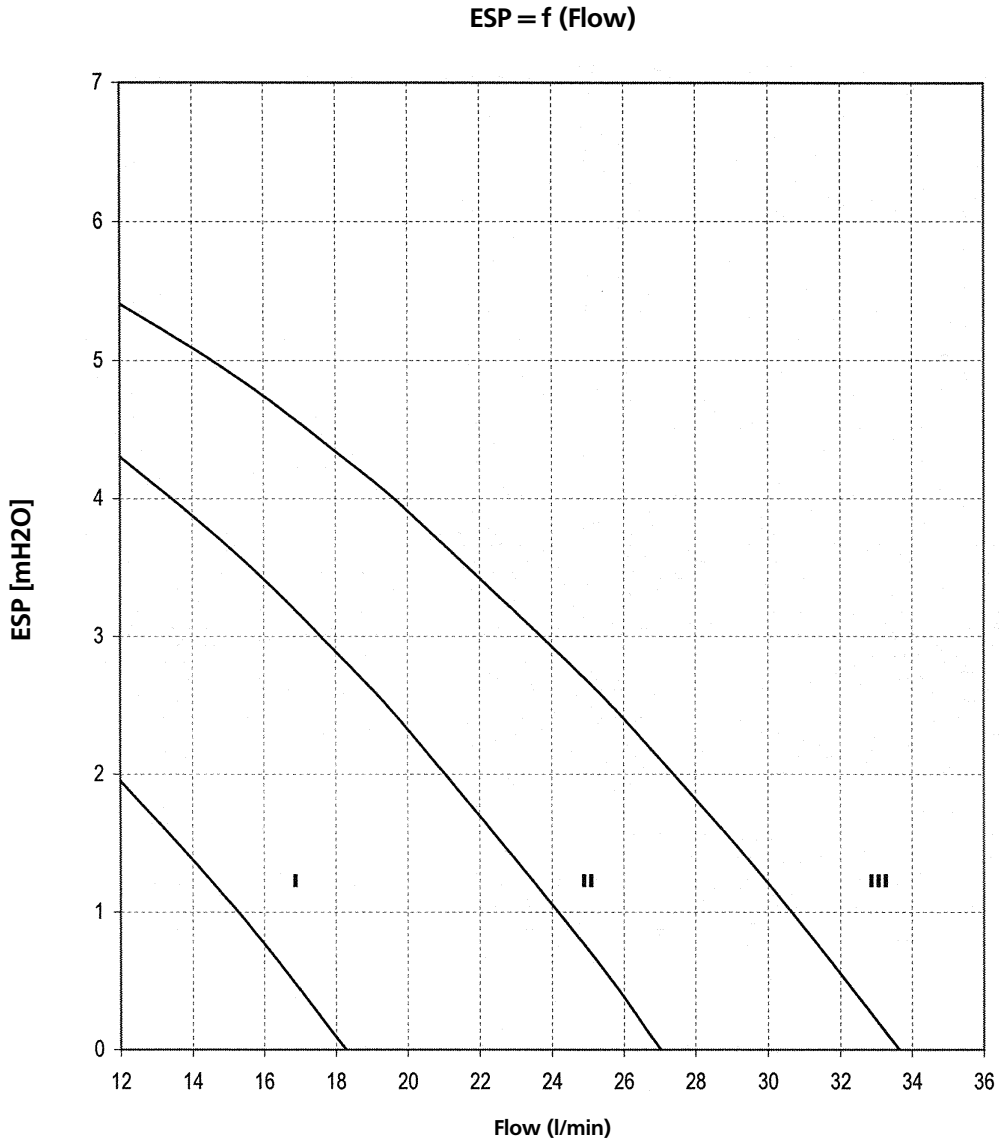

: Protect the water circuit against freezing

4TW57533-1A

# 11 Hydraulic performance

## 11 - 1 Static pressure drop unit






**I**: low speed setting pump
**II**: medium speed setting pump
**III**: high speed setting pump

ESP: External static pressure
Flow: waterflow trough the unit

**Warning:** Selecting a flow outside the curves can cause damage to or malfunction of the unit. See also minimum and maximum allowed water flowrate in the technical specifications.

4TW56749-2